

48-8-5/25

Magnetic Properties of a Number of Orthoferrites and Cyanides at Low Temperatures

equilibrium is produced, keeping the winding to its initial position. The magnetic moment of the sample is derived from the known components of this moment. The samples were produced in principle with a ceramic technique. The paper contains the descriptions of several cases of magnetic measurements at low temperatures of the following samples; SmFeO_3 , NdVO_3 , GdFeO_3 , ErFeO_3 , GdScO_3 , EuFeO_3 , YFeO_3 , ferri-ferri cyanides $\text{Fe}(\text{FeC}_6\text{N}_6)$, $\text{Fe}_3(\text{FeC}_6\text{N}_6)_2$, $(\text{Mn}_3(\text{MnC}_6\text{N}_6)_2)$, $\text{Ni}_3(\text{MnC}_6\text{N}_6)_2$ and $\text{Mn}_3(\text{CoC}_6\text{N}_6)_2$. The section dealing with the law by Curie-Weiss contains the description of the determination of the paramagnetic susceptibility according to this law of some of these compounds and a corresponding table is added. In the section on the growth of parasitic magnetism at low temperatures the authors tried to explain this anomaly by the assumption of the magnetization of very small ferromagnetic particles, which is connected with a production of fluctuation heat energy. Such particles can be magnetised only with difficulty, which results in the apparent lowering of the Curie point. This appears also from the curvature of the characteristic. This explanation, however, is not

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Magnetic Properties of a Number of Orthoferrites and Cyanides at
Low Temperatures

applicable to EuFeO_3 , which shows stability of the ferromagnetic moment. The author mentions further that Erickson established by means of neutron scattering, that the spins of NiF_2 are inclined by 10° to the tetragonal axis, and that Matarrese and Stout have determined the corresponding weak ferromagnetism. It is maintained here, that these results permit the assumption, that the parasitic ferromagnetism occurring at low temperatures can be explained by a variation of the spin angle at these temperatures. At the end of the paper, the author expresses his thankfulness to a number of foreign scientists for their collaboration on this investigation and the management of the National Laboratory in Oakridge for placing samples of ErFeO_3 at his disposal. There are 18 figures, 4 tables and 16 references, none of which are Slavic.

AVAILABLE: Library of Congress

Card 3/3

PA 69T12

VIL'YAMS, N. V. (DECEASED)

USSR/Chemistry - Petroselinic Acid
Chemistry - Nitric Oxide

Mar 1948

"Action of Nitric Oxides on Unsaturated Acids of the $C_nH_{2n-2}O_2$ Series. II. Action of N_2O_4 on Petroselinic Acid," N. V. Vil'yams (Deceased), S. V. Vasil'yev, Lab Org Chem imeni Academician N. Ya. Dem'yanov, Moscow Order of Lenin Agr Acad imeni K. A. Timiryazev, 5 1/2 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 3

Complete saturation of dual bond of acid occurs due to action of nitrogen oxide on petroselenic acids. Catalytic reduction results in obtaining of oxyamino, monocamino-, and diamino acids. Submitted 4 Jan 1947.

69T12

(N) L 12087-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c):
 ACC NR: AP6000610 SOURCE CODE: UR/0129/65/000/012/0040/0043
 MJW/JD/HW
 AUTHOR: Vil'yams, O. S.; Bol'shova, N. M.; Koval', M. Ya.
 ORG: Nikopol' Southern Tube Plant (Nikopol'skiy yuzhnotrubby zavod)
 TITLE: Effect of temperature and rate of heating on the grain size of Kh18N12T steel
 SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1965, 40-43
 TOPIC TAGS: grain size, steel, metal tube, titanium, heat treat furnace/
 Kh18N12T steel
 ABSTRACT: Annular specimens of Kh18N12T steel (0.08% C, 1.41% Mn, 0.66% Si, 0.017% P, 0.007% S, 17.85% Cr, 11.39% Ni, 0.50% Ti), cut from cold-rolled boiler superheater tubes, were heated at 800-1200°C, on increasing the temperature by 50-100°C at a time, for 30 min, and air-cooled, with the object of determining the conditions under which grain homogeneity can be maximized. Experiments with the use of different furnaces (muffle, induction, box, continuous roller) showed that the most suitable furnace for this purpose is the continuous roller furnace, (furnace length 10 m, traveling rate of tubes 0.4 m/min, temperature 1200-1230°C). The higher the heating rate, the higher is the temperature needed to obtain a roughly identical grain size. In addition, the effect of Ti on grain size was investigated on specimens of work-hardened tubes from two melts and compared with specimens of Ti-free Kh18N10 steel;

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UDC: 621.785.16:620.186.5:669.14.018.84

L 12087-66

ACC NR: AP6000610

2

it was found that in Ti-containing steel the grain size decreases with decreasing temperature and increases with increasing temperature at a faster rate than in Ti-free steel. In addition, given the same heating temperatures, the microstructure of Kh18N12T steel containing 0.44% Ti becomes more coarse-grained than the microstructure of the same steel containing 0.65% Ti. This is attributable to the retarding effect of titanium carbides on grain growth. As the titanium carbides become dissolved at elevated temperatures, an intensive grain growth sets in so that then, at temperatures above 1150°C, the grain size in Ti-containing steel (Kh18N12T) becomes much larger than in Ti-free steel (Kh18N10). Orig. art. has: 2 tables, 5 figures.

SUB CODE: 11, 13, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 000

11

Card

2/2

L 12144-66 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) MJW/JD/HW

ACC NR: AP6000595

SOURCE CODE: UR/0133/65/000/012/1108/1110

AUTHOR: Bernshteyn, M. L.; Dregan, N.; Korobochkin, I. Yu.; Vil'yans, O. S.;
Kurilenko, V. Kh.; Koval'chuk, T. M.

ORG:

TITLE: Possibilities and prospects for the combined hot and cold working of drilling-rig pipe

SOURCE: Stal', no. 12, 1965, 1108-1110

TOPIC TAGS: pipe, ^{steel} heat treatment, cold working, work hardening, carbon steel low alloy steel/ D steel, 36G2S steel

ABSTRACT: It is shown that the high-temperature thermomechanical treatment (combined cold and hot working) of pipe manufactured from D and 36G2S steels (0.44% C, 1.10% Mn, 0.32% Si, and 0.38% C, 1.65% Mn, 0.58% Si, respectively), as based on water quenching from 840-850°C immediately after rolling, followed by tempering for 1 hr at temperatures of from 100 to 600°C, markedly increases the mechanical properties of the pipe (following low-temperature tempering, $\sigma_B = 220-240 \text{ kg/mm}^2$ at $\delta = 7-8\%$, and following high-temperature tempering $\sigma_B = 95-115 \text{ kg/mm}^2$ at $\delta = 11-14\%$) This effect is still further enhanced when the treatment is followed by tempering at 500°C for 1 hr, high-speed heating to 850°C for 3 min, water quenching, and final low-temperature temper-

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UDC: 621.774.659.562

L 12144-66

ACC NR: AP6000595

ing, which results in the work-hardening of the metal. Experiments with accelerated compressed-air cooling of the pipe immediately after rolling show that this magnifies even further the effect of preceding work hardening as compared with ordinary normalization, as was found by subjecting pipe rolled from D and 36G2S steels to cooling with high-pressure compressed air immediately after rolling, with subsequent tempering at from 400 to 600°C for 1.5 hr. This opens broad vistas for replacing alloy steels with carbon and low-alloy steels. Orig. art. has: 5 tables, 1 figure.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 000

Card

2/2

ACC NR:

AR6035103

SOURCE CODE: UR/0137/66/000/008/D032/D032

AUTHOR: Vil'yams, O. S.

TITLE: Influence of billet structure and method of forming on the process of softening in cold-rolled and cold-drawn pipe made of Kh18N10T steel

SOURCE: Ref. zh. Metallurgiya, Abs. 8D221

REF SOURCE: Sb. Proiz-vo trub. Vyp. 16 M., Metallurgiya, 1965, 93-101

TOPIC TAGS: pipe, ^{cold drawing,} cold rolling, hardening, plasticity, steel/Kh18N10T steel

ABSTRACT: The influence of the billet's structure and method of forming on the softening of cold-rolled and cold-drawn pipe made of the Kh18N10T steel has been investigated. The initial structure (both fine- or coarse-grained) and method of forming exert considerable influence on hardening as well as softening. The cold-rolled and hard-drawn pipe may be made of identically structured billets and subjected to a practically the same degree of deformation but their final structure and properties are different. For instance, the fine-grained billets obtained by routine thermal treatment will make products with a much

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UDC: 621.774.017.2

ACC NR: AR6035103

higher degree of plasticity by the cold-drawing than by cold-rolling process. This high plasticity is achieved following the recrystallization phase. In view of this it is recommended that heat treating be conducted at substantially lower temperatures than in the case of cold-rolled products. One way to obtain cold-rolled pipes of high plasticity is to make them from coarse-grained billets. The reheating of billets for cold-drawn pipes is inadmissible because it would impair both the structure and the properties; the reheating of billets slated for cold-rolling is advisable since it promotes an increase in strength and plasticity of the pipes. The bibliography contains 5 titles. There are 5 figures. [Translation of abstract] [KP]

SUB CODE: 13, 11/

Card 2/2

VIL'YAMS, O.S., inzh.

Effect of the billet structure and the deformation method on the stress relief of cold-worked OKh18Ni10T steel. Stal' 25 no.8:749-751 Ag '65. (MIRA 18:2)

1. Nikopol'skiy yuzhnotrubby zavod.

KHOREV, A.I.; YESAULOV, A.T.; VIL'YAMS, O.S.; PRUDEKOVA, R.A.

Hot rolling of VT14 alloy pipe at temperatures in the Alpha
and Beta region. TSvet. met. 38 no.6:63-65 Je '65.

(MIRA 13:10)

VIL'YAMS, O.S., inzh.; LIBENSON, A.L., inzh.

Surface carburizing of steel 10 and 20 pipe in the hot extrusion process. Stal' 23 no.7:638-639 J1 '63. (MIRA 16:9)

1. Yuzhnotrubbyy zavod.
(Pipe, Steel) (Case hardening)

ACCESSION NR: AP4020049

S/0032/64/030/003/0350/0351

AUTHORS: Vil'yams, O. S.; Bol'shova, N. M.; Oleynik, O. V.

TITLE: The effect of sample form on the mechanical properties of steel Kh18N10T pipes

SOURCE: Zavodskaya laboratoriya, v. 30, no. 3, 1964, 350-351

TOPIC TAGS: steel pipe, steel Kh18N10T, mechanical property, elastic property, cold rolled pipe, high temperature treatment, elongation, rupture

ABSTRACT: Tensile tests of cold rolled pipes showed that their mechanical properties depend on the sample form. This relation was studied in samples 260 mm long and in segments 8 mm wide cut from the pipes produced of steel Kh18N10T (γ : 0.09 C; 18.10 Cr; 10.22 Ni; 1.17 Mn; 0.50 Si; 0.011 S; and 0.035 P). The samples were treated thermally (700-1100) before being tested in a 30-T machine at the rate of 4 mm/min before the metal flow started, and of 20 mm/min thereafter. The results revealed that the mechanical properties of the segments were better than those of the pipe samples, except for the local elongation (measured in the necked area) which was 3-6% larger in the pipe samples than in the segments. The plastic properties (elongation) of segments increased regularly

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ACCESSION NR: AP4020049

with the increase of temperature and reached a maximum at 1050-1100C. In pipe samples it remained practically unchanged in the interval 950-1100C, whereas the grain size showed a considerable increase. This may be taken as evidence of the distorting effect of the sample form on the mechanical properties of pipe metals. The same effect was observed by measuring the variation in the wall thickness along the pipe segments and on metal strips 8 mm wide cut from the pipes. In the pipe segments the deformation was uniform along the whole length, while in the strips it was concentrated in a zone extending approximately over 1/3 of the sample length. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Nikopol'skiy yuzhnotrubbyy zavod (Nikopol' Southern Pipe Plant)

SUBMITTED: 00

DATE ACQ: 27Mar64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

AKIMOVA, Ye.P.; RUDOV, V.S.; SHEVCHENKO, L.N.; NESTEROVA, N.N.;
Prinimali uchastiye: VASILENKO, S.I.; ZUYEV, I.I.; VIL'YAMS, O.S.;
LAGUTINA, R.V.; DERGACH, A.Ya.; KITANENKO, V.P.; KIRVALIDZE, N.S.;
YAKIMENKO, N.S.; SAMOYLENKO, V.D.

Effect of the method of manufacturing EI847 steel on the quality
of tubes. Stal' 21 no.12:1113-1114 D '61. (MIRA 14:12)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (for
Akimova, Rudov, Shevchenko, Nesterova). 2. Nikopol'skiy
yuzhnotrubnyy zavod (for Vasilenko, Zuyev, Vil'yams, Lagutina,
Dergach, Kitanenko, Kirvalidze, Yakimenko, Samoylenko).
(Steel, Stainless—Electrometallurgy)
(Pipe mills—Quality control)

L 2365-66 EWT(d)/EWT(m)/EWA(d)/EWT(v)/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/EWP(1)
 ACCESSION NR: AP5019946 EWA(c) MJW/JD/HI UR/0133/65/000/008/0749/0751
 669.18-147-412.621.746.73

AUTHOR: Vil'yams, O. S. (Engineer)

TITLE: Effects of blank microstructure and method of deformation on weakening of cold-formed OKh18N1OT steel pipes

SOURCE: Stal', no. 8, 1965, 749-751

TOPIC TAGS: pipe rolling, pipe drawing, steel pipe, pipe property / OKh18N1OT steel alloy, KhPT 32 rolling mill

ABSTRACT: The effects of initial blank microstructure, method of pipe production (rolling or drawing), and heat treatment temperature on the properties and structure of OKh18N1OT pipes were investigated. Standard 32 x 1.9 mm blanks were heat treated to produce small grain (ball 8 and less) and large grain (ball 1-4) microstructures, rolled (on KhPT-32 mill) into 20 x 1 mm (62-67% deformation) and 20 x 2.3 mm (21-29% deformation) pipes or drawn into 25 x 1.9 mm (21-27% deformation) pipes, heat treated at 650-1050C for 30 minutes (cooled in air), and tested for strength, elongation, and microstructure. The results are shown in Fig. 1 on the Enclosure from which it was found that the drawn pipes have to be heat

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L 2365-66

ACCESSION NR: AP5019946

6
treated at substantially lower temperatures (960-980C) than the rolled pipes (1030-1050C) to produce required strength properties. N. M. Bol'shova and S. K. Nezhivaya participated in the work. Orig. art. has: 3 figures.

ASSOCIATION: Nikopol'skiy yuzhnotrubby zavod (Nikopol Pipe Factory)

SUBMITTED: 00

ENCL: 01

SUB CODE: MM

NO REF SOV: 006

OTHER: 001

Card 2/3

L 2365-66
ACCESSION NR: AP5019946

ENCLOSURE: 01

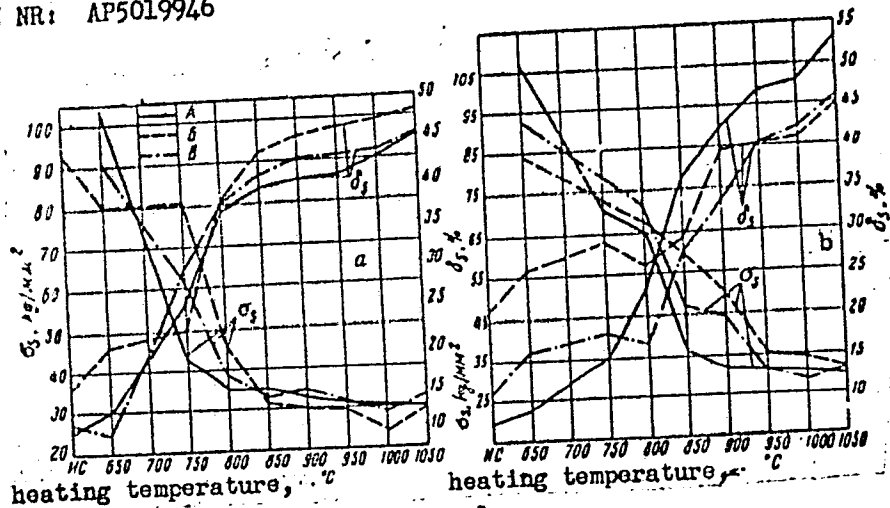


Fig. 1.
Cold formed pipe properties (OKh18N10T steel) vs heat treat temperature:
A, B- rolled; C- drawn; a- large grains; b- small grains

BVK
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L 61540-65 TWT(M)/EAA B T-S&A t O K K 197 001 1 1965
 MJW/JL/HW
 ACCESSION NR: AP5018867
 1970136/65/001859820011-6
 650.291-122 4 151

AUTHOR: Khorov, A. I.; Yesaulov, A. T.; Vil'yams, O. S.; Prudkova, E. A.

TITLE: Hot tube forming of VT14 alloy at temperatures in the $\alpha + \beta$ region.

SOURCE: Tsvetnyye metally, no. 6, 1965, 63-65

TOPIC TAGS: ¹titanium alloy, hot working, metal mechanical property, martensitic transformation, heat treatment, metallographic examination

ABSTRACT: Tubes of VT14 Ti alloy were hot formed on a piercing mill to a final diameter of 194 mm with a wall thickness of 14-16 mm. The alloy was first heated to 1080°C for 2.5-3 hrs, then formed into a case (wall thickness of 2 mm), then it was cooled on a roller type conveyor to 820-820°C, after which it entered the second piercing stand for final reduction. The purpose of cooling was to place the alloy in the two-phase ($\alpha + \beta$)-region, i.e. below $\alpha \rightarrow \beta$ -transformation (920°C). Further thermomechanical treatment was done in order to even out the wall thickness, while some specimens were quenched in water from 820°C. Mechanical tests and metallographic studies were made on the processed tubes, both for these treatments and for different

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L 63540-55

ACCESSION NR: AP5015867

forms of heat treatment. Strength, ductility, and impact strength are plotted as functions of quench temperature. Two figures show the same data, except for additional aging, which was done after quenching. For air or water quenching, the properties show little change. However, after aging at temperatures ranging from 460 to 520°C, the water quenched samples have higher strengths with lower ductilities. For producing pierced tubes of satisfactory quality, it is necessary to cool the tubes to 760-820°C before the final draft, to avoid heating into the B-region. Specimens heated above 820°C tend toward brittle behavior. As a precautionary measure, it is recommended that the deformed zone be water cooled in administering the final draft. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 001

OTHER: 001

Card 2/2

VIL'YAMS, O.S., inzh.; KOVAL'CHUK, T.M.

Tendency of electrically welded Kh18N10T steel pipe toward
intercrystalline corrosion. Metalloved. 1 term. obr. met.
no.1:39-41 Ja '63. (MIRA 16:2)

1. Nikopol'skiy yuzhnotrubbyy zavod.
(Pipe, Steel—Welding)
(Welding—Corrosion)

ACCESSION NR: AR4036264

8/0137/64/000/003/1058/1058

SOURCE: Referativnyy zhurnal. Metallurgiya, Abs. 31338

AUTHOR: Vil'yams, O. S.; Bol'shova, N. M.; Neshivaya, S. K.

TITLE: Concerning the carburisation of Kh18N10T stainless steel

CITED SOURCE: Sb. Proiz-vo trub. Vyyp. 11. M., Metallurgizdat, 1963, 103-106

TOPIC TAGS: Stainless steel carburisation, intercrystalline corrosion, steel lubrication, steel lubricant

TRANSLATION: An investigation was made into the effect of the composition of the lubricant remaining on the surface of pipes after cold deformation and of the temperature and duration of soaking during heat treatment on the process of carburization and tendency toward intercrystalline corrosion (TIC) of pipes made of Kh18N10T steel. The lubricant used consisted of graphite with machine oil, graphite with water glass, and talc with castor oil. Prior to the heat treatment, the specimens, 80 mm long, were coated with the lubricant and placed in small cylinders

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ACCESSION NR: ARL036264

smeared with a mixture of clay and asbestos. After being heated at 1100° for 30 min and cooled in air, the standard specimens were tested for TIC, with preliminary "inducing" tempering at 650°. All the specimens subjected to heat treatment in contact with C-containing lubricants acquired a TIC. The greatest TIC was caused by the mixture of graphite and machine oil, and the smallest by the mixture of talc and castor oil. The damage done by intercrystalline corrosion is greater the greater the depth of the carburized layer. A study of the depth of the carburized layer under conditions of saturation with C in the solid carburizer between 700 and 1100° showed that the depth varies from 0.016 mm at 700° to 0.81 mm at 1100° (soaking time, 30 min). The TIC was observed after soaking for 90 min at 750°. A second heat treatment of the carburized specimens for the purpose of eliminating the TIC is not advisable, as it only causes the depth of the carburized layer to increase. M. Shapiro.

DATE ACQ: 17Apr64

SUB CODE: ML

ENCL: 00
1

Card 2/2

OSTRENKO, V.Ya.; YUFEROV, V.M.; GEYKO, I.K.; TYR, V.R.; OSION, N.A.;
CHEMERINSKAYA, R.I.; VIL'YAMS, O.S.; LAGUTINA, R.V.

Pipe production from new heat-resistant ferritic-martensitic
steels. Stal' 23 no. 3:258-263 Mr '64. (MIRA 17:5)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut,
Pervoural'skiy novotrubnyy zavod i Nikopol'skiy yuzhn trubnyy
zavod.

VIL'YAMS, O.S.; BOL'SHOVA, N.M.; OLEYNIK, O.V.

Effect of the type of the sample on the mechanical properties
indices of pipes made from 1810T steel. Zav.lab. 30 no.31
350-351 '64. (MIRA 17:4)

1. Nikopol'skiy yuzhnotrubnyy zavod.

SL 15664-63

EWP(q)/EWT(m)/BDS AFFTC JD/HW

ACCESSION NR: APJ003650

S/0133/63/000/007/0638/0639

AUTHORS: Vil'yams, O. S. (Engineer); Libenson, A. L. (Engineer)

TITLE: Surface carburization during hot-pressing pipes made of steel 10 and 20

SOURCE: Stal', no. 7, 1963, 638-639

TOPIC TAGS: surface carburization, pipe, steel 10, steel 20, hot pressing

ABSTRACT: The graphite-oil lubricant used in hot pressing caused surface carburization of the low-carbon steels 10 and 20. The nature of this process and its distribution along the pipe, as well as its penetration depth, have been studied. According to the microstructure of the carburized sections, there is a considerable carbon content in the surface layer. This was explained by the surface melting of the metal during pressing. The small inclusions of thin graphite plates point to a rapid cooling of a liquid phase rich in carbon. The type of carburization during pressing was caused by the diffusion of carbon under specific conditions: 1) temperatures (1160-1190C) were higher than those of a common cementation; and 2) the pressures reached 10 kg/mm². These pressures

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ACCESSION NR: AP3003650

increased the action of the carburizing medium, but the carbon diffusion into the metal was not very significant because of the shortness of the pressing cycle (1.5 sec). The distribution of the carburized layer was studied in 460 samples. Orig. art. has: 5 figures.

ASSOCIATION: Yuzhnotrubbyy zavod (Southern Pipe Plant)

SUBMITTED: 00

DATE ACQ: 02Aug63

ENCL: 00

SUB CODE: ML

NO REF SOY: 004

OTHER: 000

Card 2/2

VIL'YAMS, O.S.; BOL'SHOVA, N.M.; KOVAL', M.Ya.

Effect of temperature and the rate of heating on the grain size
of Kh18Ni2Ti. Metalloved. i term. obr. met. no. 12:40-43
D '65. (MIRA 18:12)

1. Nikopol'skiy yuzhnотрубный завод.

IOBANOV, P.; IOZA, G.; CHIZHEVSKIY, M.; VOROB'YEV, S.; VIL'YAMS, V.;
SOBOLEV, S.; PAVLOV, G.; GARKUSHA, I.; FRAMTSESSON, V.; MERSHIN, A.;
PERSHINA, M.

Vladimir Petrovich Bushinskii. Zemledelie 8 no.7:94-95 J1 '60.
(MIRA 13:9)
(Bushinskii, Vladimir Petrovich, 1885-1960)

7/12 YANB V.I.
BENEDIKTOV, I.A., redaktor; GRITSENKO, A.V., redaktor; IL'IN, M.A., zamesti-
tel' glavnogo redaktora, LAPTEV, I.D., LISKUN, Ye.F.; LOBAHOV, P.P.,
glavnyy redaktor; LYSZNEO, T.D.; SKRYABIN, K.I.; STOLKTOV, V.N.;
PAVLOV, G.I., kandidat sel'skokhozyaystvennykh nauk, nauchnyy redaktor;
SOKOLOV, N.S., professor, nauchnyy redaktor; ANTIPOV-KARATAYEV, I.N.,
doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; KARPINSKIY,
N.P., kandidat sel'skokhozyaystvennykh nauk, nauchnyy redaktor;
SHKSTAKOV, A.G., doktor sel'skokhozyaystvennykh nauk, professor, nauch-
nyy redaktor; RUBIN, B.A., doktor sel'skokhozyaystvennykh nauk, nauch-
nyy redaktor; KOMARNITSKIY, N.A., dotsent, nauchnyy redaktor; LYSZNEO,
T.D., akademik, nauchnyy redaktor; POLYAKOV, I.M., professor, nauchnyy
redaktor; SHCHEGOLEV, V.N., doktor sel'skokhozyaystvennykh nauk,
professor, nauchnyy redaktor; YAKUSHKIN, I.V., akademik, nauchnyy
redaktor; LARIN, I.V., professor, doktor biologicheskikh nauk, nauchnyy
redaktor; SMELOV, S.P., professor, doktor biologicheskikh nauk, nauchnyy
redaktor; MEL'SHTEYN, V.I., professor, doktor sel'skokhozyaystvennykh
nauk, nauchnyy redaktor; SHCHERBACHEV, D.M., professor, doktor medi-
tsinskikh nauk, nauchnyy redaktor; OGOLEVETS, G.S., kandidat sel'sko-
khozyaystvennykh nauk, nauchnyy redaktor; YAKOVLEV, P.N., akademik,
nauchnyy redaktor; YEKIMOV, V.P., agronom, nauchnyy redaktor [deceased],
BYTINGIN, G.P., professor, doktor sel'skokhozyaystvennykh nauk, nauch-
nyy redaktor; TIMOFEEV, N.N., professor, nauchnyy redaktor; TUROV,
S.I., professor, doktor biologicheskikh nauk; YUDIN, V.M., akademik,
nauchnyy redaktor; LISKUN, Ye.F., akademik, nauchnyy redaktor; VITT,
V.O., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redak-
tor; KALININ, V.I., kandidat sel'skokhozyaystvennykh nauk, nauchnyy
redaktor

(Continued on next card)

BENEDIKTOV, I.A.--- (continued) Card 2.

GRUBEN', L.K., akademik, nauchnyy redaktor; NIKOLAYEV, A.I., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; RED'KIN, A.P., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; SMETNEV, S.I., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; POPOV, I.S., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; MANTSEYFEL', P.A., professor nauchnyy redaktor; INIKHOV, G.S., professor, doktor khimicheskikh nauk, nauchnyy redaktor; ANFIMOV, A.N., professor, nauchnyy redaktor; GUBIN, A.F., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; POLTEV, V.I., professor, doktor veterinarnykh nauk, nauchnyy redaktor; LINDE, V.V., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; CHERGAS, B.I., professor, doktor biologicheskikh nauk, nauchnyy redaktor; NIKOL'SKIY, G.V., professor, nauchnyy redaktor; AVTOKRATOV, D.M., professor, doktor veterinarnykh nauk, nauchnyy redaktor; IVANOV, S.V., professor, doktor biologicheskikh nauk, nauchnyy redaktor; VIKTOROV, K.P., professor, doktor veterinarnykh nauk, nauchnyy redaktor; KOLYAKOV, Ya.Ye., professor, doktor veterinarnykh nauk, nauchnyy redaktor; ANTIFIN, D.N., professor, doktor veterinarnykh nauk, nauchnyy redaktor; MARKOV, A.A., professor, doktor veterinarnykh nauk, nauchnyy redaktor; DOMRACHEV, G.V., professor, doktor veterinarnykh nauk, nauchnyy redaktor; OLIVKOV, B.M., professor, doktor veterinarnykh nauk, nauchnyy redaktor [deceased]; FLEGMATOV, N.A., professor, doktor veterinarnykh nauk, nauchnyy redaktor; BOLTINSKIY, V.N., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; VIL'YAMS, Vl.P., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; KHASHOV, V.S., kandidat tekhnicheskikh nauk, nauchnyy redaktor;

(Continued on next card)

BENEDIKTOV, I.A.---(continued) Card 3.

YEVREINOV, M.G., akademik, nauchnyy redaktor; SAZONOV, N.A., doktor tekhnicheskikh nauk, nauchnyy redaktor; NIKANDROV, B.I., inzhener, nauchnyy redaktor; KOSTYAKOV, A.N., akademik, nauchnyy redaktor; CHERKASOV, A.A., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; DAVITAYA, F.F., doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; IVANOV, N.N., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; ORLOV, P.M., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; LOZA, G.M., kandidat ekonomicheskikh nauk, nauchnyy redaktor; CHERNOV, A.V., kontrol'nyy redaktor; ZAVARSKIY, A.I., redaktor; ROS-SOSHANSKAYA, V.A., redaktor; FILATOVA, N.I., redaktor; YEMEL'YANOVA, N.I., redaktor; SILIN, V.S., redaktor BRANZBURG, A.Yu., redaktor; MAGNITSKIY, A.V., redaktor terminov; KUDRYAVTSEVA, A.G., redaktor terminov; AKSENOVA, A.P., mladshiy redaktor; MALYAVSKAYA, O.A., mladshiy redaktor; FEDOTOVA, A.F., tekhnicheskiiy redaktor

(Continued on next card)

BENEDIKTOV, I.A.---(continued) Card 4.

[Agricultural encyclopedia] Sel'skokhoziaistvennaia entsiklopediia.
Izd.3-e, perer. Moskva, Gos. izd-vo selkhoz. lit-ry. Vol.5. [T-IA.]
1956. 663 p. (MLRA 9:9)
(Agriculture---Dictionaries and encyclopedias)

Vil'YAMOV, V.M.

137-58-5-9300

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 73 (USSR)

AUTHOR: Okunev, A.I., Sarkisov, I.G., Vil'yamov, V.M.

TITLE: Employment of Metallic Reducing Agents in Order to Intensify the Process of Zinc Removal from Slags (Intensifikatsiya obes-tsinkovaniya shlakov putem primeniya metallicheskih vosstanoviteley)

PERIODICAL: Byul. Tsentr. in-t inform. M-va tsvetn metallurgii SSSR, 1957, Nr 2, pp 17-19

ABSTRACT: A discussion of the possibilities of increasing the efficiency of the process of fuming of slags by means of employing metallic reductants; the results of experimental shop tests performed at the Krasnoural'sk plant are shown. It is recommended that metallic Fe (scrap, chips, etc.) be employed as a reductant.

G.S.

1. Slags--Processing 2. Zinc--Separation 3. Iron--Applications

Card 1/1

Vil'yamov, V.M.

137-58-5-9299

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 73 (USSR)

AUTHORS: Okunev, A.I., Vil'yamov, V.M., Sarkisov, I.G.

TITLE: Results of Shop Experiments on Copper Extraction From Slags After Removal of Zinc and Reduction of Magnetite (Rezultaty zavodskikh opytov obezmezhivaniya shlakov posle ikh obestnikovaniya i vosstanovleniya magnetita)

PERIODICAL: Byul. Tsentr. in-t inform. M-va tsvetn. metallurgii SSSR, Nr 4, pp 19-22 1957

ABSTRACT: Investigations were carried out in order to find means of obtaining low-Cu waste slags following the extraction of zinc from converter slags and rich waste slags. It is shown that waste slags containing 0.4% Cu may be obtained when a matte phase containing 7.5-15% Cu is formed. The Cu and Au losses occurring during the process are reduced by 33 and 60 percent, respectively. The formation of a matte phase may be ensured by addition of lean matte or pyrite. The consumption of pyrite depends on the content of Cu in the original slag, as well as on the methods and timing of the charging process. The method described may be employed for the extraction of Cu from slags of lead and tin smeltings. 1. Slags--Processing 2. Copper G.S. --Production 3. Slags--Properties

Card 1/1

GORDIYENKO, A.G.; [HORDIENKO, A.H.]; VIL'YAMS, A.P.; AFANAS'YEV, N.G.
[Afanas'iev, M.H.]; SIDORENKO, L.I. [Sydorenko, L.I.]

Remote proton magnetometer with a long line for measuring wide
ranges of magnetic fields. Ukr. fiz. zhur. 5 no.6:857-858 N-D '60.
(MIRA 14:3)

1. Fiziko-tekhnicheskii institut AN USSR.
(Nuclear magnetic resonance)
(Magnetometer)

28435
S/185/61/006/002/007/020
D210/D304

A remote proton magnetometer

detectors is that they have a low signal to noise ratios compared to the proton detector. The magnetometer was constructed in three parts. The detector was connected to the principal part of the magnetometer by a cable 0.7 m long. The control section of the magnetometer was placed in a control chamber 20 m away from the magnet. In order to transmit through the cable a frequency of 60 Mc/s, necessary for measuring a field strength of 13 koe an additional coil of inductance L_k was utilized as first suggested by Popov, A. X

I. of the Institute of Technical Physics, AS UkrSSR. The inductance of this coil is considerably smaller than the total inductance of the detector coil and the high frequency cable. The operation of the magnetometer was carried out in two ranges. In the lower range (7.5 to 22 Mc/s) the impedance of the detecting system was made up of the detector coil, the capacity and inductance of the cable, the capacity of the variable condenser and the input capacity of the magnetometer. In the higher range (20 to 60 Mc/s) the additional coil L_k was included in the detector circuit. The ran-

Card 2/3

28435

A remote proton magnetometer

S/185/61/006/002/007/020
D210/D304

ges were selected remotely by means of a relay. Slow tuning was achieved by altering the capacity of the variable condenser with a reversible motor. The magnetic field was indicated approximately on a calibrated scale the signal being generated by a potentiometer on the axis of the condenser. For accurate measurements the generator was tuned to an accuracy of 10^{-5} by varying slowly the anode potential on the generator lamp by means of the potentiometer. The frequency was measured with a crystal controlled meter. The magnetic field was measured with an accuracy of $5 \cdot 10^{-5}$ at a signal-to-noise ratio of 15 to 50 which is sufficient for automatic field stabilization. A circuit diagram of the electronic control unit is given in the paper. There are 3 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: H.W. Knoebel and E.L. Hahn, The Review of Scientific Instruments, 22, 904, 1951; N.B. Blonbergen, E.M. Pureell, K.N. Paund, Phys. Rev., 73, 679, 1949.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR, m. Kharkiv
(Technical Physics Institute AS UkrSSR, Khar'kov)

SUBMITTED: July 1, 1960
Card 3/3

AFANAS'YEV, N.G. [Afanas'iev, M.H.]; VIL'YAMS, A.P.; GORDIYENKO, A.G.
[Hordiienko, A. H.]; SIDORENKO, L.I. [Sydorenko, L.I.]

Remote action magnetometer. Ukr. fiz. zhur. 6 no.2:191-196
Mr-Ap '61. (MIRA 14:6)

1. Fiziko-tekhnicheskiy institut AN USSR, g. Khar'kov.
(Magnetometer)

18.8300

28544 S/133/61/000/007/015/017
A054/A129

AUTHORS: Vil'yams, O. S., Bol'shova, N. M., Engineers

TITLE: Effect of heat treatment on the intercrystallite corrosion tendency of tubes made of 1X18H9T (1Kh18N9T) steel

PERIODICAL: Stal', no. 7, 1961, 647 - 648

TEXT: Tubes made of 1Kh18N9T steel display a tendency to intercrystallite corrosion. In order to establish the causes of this phenomenon and to eliminate it by countermeasures tests were carried out in the Nikopol'skiy yuzhnotrubnyy zavod (Nikopol' Southern Tube Plant) with cold-hardened and cold-rolled tubes of various dimensions made of 1Kh18N9T steel with a ratio of the Ti and C content varying between 4.0 and 6.9. 80-mm tube sockets were heated by steps of 50°C (at times of 25°C) from 850° to 1,300°C. The holding time was 30 min, followed by cooling on air. The heat-treated tube sockets were tested for intercrystallite corrosion according to GOST (GOST) 6032-58 on samples without homogenization after stimulating annealing at 650°C for two hours. At the same time the grain size and the amount of bonded titanium were also controlled. It was found that the tendency to intercrystallite corrosion in the steel tested increased after hardening X

Card 1/2

28544 S/133/61/000/007/015/017
A054/A129

Effect of heat treatment on the intercrystallite...

from 1,175°C and higher temperatures. The overheated metal displayed a large-grain structure and low amount of bonded titanium. By modifying the titanium and carbon content ratio from 4.0 to 6.9 the overheating temperature of the tube causing the tendency to intercrystallite corrosion was not affected to any great extent. This trend could be neutralized by repeated hardening from 1,050°C, during which the amount of bonded titanium increased 1 1/2 - 2 1/2 times. The grain size is not conclusive to determine the intercrystallite corrosion tendency of the metal. The amount of titanium has also to be considered; with a content of bonded titanium above 0.2% the metal as a rule displays sufficient resistance against intercrystallite corrosion. There are 2 tables.

ASSOCIATION: Nikopol'skiy yuzhnotrubbyy zavod (Nikopol' Southern Tube Plant)

Card 2/2

PA 44/49T15

VIL'YAMS V. R.

USSR/Agriculture
Agricultural Machinery

May 49

"Requirements of Machine Construction," Acad V. R.
Vil'yams, Deputy to Supreme Soviet USSR, 6 pp

"Sov Agron" No 5

Goal set by new Five-Year Plan can be met only if
agricultural-machine-construction factories ful-
fill their quotas. Describes some of the more
vital equipment, and urges responsible factories
to guarantee planned output.

LC

44/49T15

ITINSKAYA, Nadeshta Ivanovna, dotsent; VIL'YAMS, V.I., zaslushennyy deyatel' nauki i tekhniki, doktor tekhnicheskikh nauk, professor, redakter; GAVRILOV, F.P., redakter; VESKOVA, Ye. I., tekhnicheskiy redakter.

[Fuel and lubricants] Toplivo i smazochnye materialy. Pod red.V.I. Vil'-iansa. Moskva, Gos.izd-vo sel'skokhoziaistvennoi li-ry, 1956. 295 p.
(MLRA 9:5)

1. Moskovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva imeni V.M.Molotova.
(Fuel) (Labrication and lubricants)

VIL'YAMS, Vasilii Robertovich, akademik. Primela uchastiye KOLPENSKAYA, N.P., dotsent, starshiy nauchnyy sotrudnik. BUSHINSKIY, V.P., akademik, zasluzhennyy deyatel' nauki, red.; AVAYEV, M., red.; LIL'YE, A., tekhn.red.

[Selected works] Izbrannye sochineniia. Moskva, Moskrabochii, 1948.
465 p. (MIRA 13:8)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina; chlen-korrespondent Akademii nauk SSSR (for Bushinskiy).
(Agriculture)

VIL'YANS, V.V., prof., doktor khimicheskikh nauk

Separation and quantitative determination of silicic acids
of soils. Izv. VASKh no.2,126-131 195. (MIS 1979)

1. Kafedra organicheskoy khimii Moskovskoy akademii nauk
skokhcheyaystvennykh nauk imeni Timiryazeva.

CA

PROCESSES AND PROPERTIES INDEX

11C

Preparation of nicotinic acid from anabasine. V. V. Vil'yams and I. M. Mavlyanov. *J. Applied Chem.* (U. S. S. R.) 17, 228-9(1944).—HNO₃ (d. 1.45) (4 kg.) is mixed with 210 g. anabasine and heated to 90°; after the initial reaction the mixt. is heated on a water bath for 15-16 hrs. and evapd. on a water bath. The crude nitrate salt is dissolved in water and cooled; *nicotinic acid nitrate*, m. 190-2° (*monohydrate*) is obtained. This salt (420-490 g.) in 900 cc. hot water is treated with 80 g. Na₂HPO₄. 12H₂O and cooled; 250-300 g. *nicotinic acid* is obtained; a 2nd crystn. gives 140-60 g. pure product, m. 230-2°.

G. M. Kosolapoff

ASS-SLA REFALLURGICAL LITERATURE CLASSIFICATION

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VIL'YAKS, V. V.

35370. Na trasse lesnoy polosy (Chapaevsk-vladimirovka. Putevye Zapisi) Ogonek,
1949, No. 47, c. 23

SO: Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

VIL'YANSKY, V.F.

WILLIAMS, V.V.; TARANOVA, R.D.

Determination of the pigments of red wine. Vinodeliye i Vinogradarstvo
S.S.S.R. 10, No.4, 29-30 '50. (MLRA 3:3)
(CA 47 no.16:8310 '53)

1 Chromatographic separation of the coloring substances of wine. V. V. Vilyams and R. D. Taranova (K. A. Timiryazev Agr. Acad., Moscow). *Vinodelie i Vinogradarstvo* S.S.S.R. II, No. 7, 16-18 (1951).—The sepn. and detn. of the coloring substances of wine and of wine (I) and antho (II). A 170 mm. long and 8-11 mm. diam. glass tube was tightly packed with fat-free cotton-cellulose wool to the height of 110 mm. One to three ml. wine (or antho) samples were acidified by addn. of a drop of concd. HCl, dild. 1:2 with dild. water, and transferred to the chromatographic column. I was eluted from the column first with dild. H₂O acidified by HCl to pH 1-2; II was eluted next with acidified (pH 1-2) 50% EtOH. The elution rate was 15-20 drops/min. The eluate contg. I was dild. 1:1 with EtOH and that contg. II brought to contain vol. by addn. of 50% EtOH; aliquots of the solns. were then taken for spectroscopic detns. (Pulfrich spectrophotometer 530 mμ, filter S-53) with a pure prepn. of II as a standard. To obtain the amt. of I the value found on the standard curve was multiplied by 1.44. The amts. of I and II, found in 3 different wines, were 115.2, 288, and 310.8, and 50, 260, and 300 mg./l., resp. The method can be successfully used for the sepn. of the aglucon from any glucoside of any anthocyanin pigment. E. Wierblek.

VIL'YAMS, V. V.

Agricultural Research

Famous agronomist of our country (V. R. Vil'yams), Znanie-sila, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1952 ~~TOP SECRET~~ Unclassified.

VIL'YANS, V.V.

The Committee on Stalin Prizes for the Council of Ministers USSR in the field of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1946 and 1947: "Sovetskaya Meditsina", Moscow, No. 12-14, 1947, 13 Apr. 1947.

<u>Name</u>	<u>Title of work</u>	<u>Submitted by</u>
Ogolevets, G.S.	"Encyclopedic Dictionary	Moscow Agricultural Academy
Vil'yans, V.V.	of Therapeutic, Essential	imeni K.A. Timiryazev
Razdorskaya, L.A.	Oil-Bearing, and Toxic	
Ivanov, F.V.	Plants"	
L'vov, N.A.		
Voroshilov, V.N.		

SC: 4-30604, 7 July 1947

VIL'YAMS, V.U.

Biosynthesis of polyene compounds in plants. II. The influence of a change in the conditions of plant development on the qualitative relations of the green and yellow pigments in leaves. V. V. Vil'iams, *Tr. Vsesoyuzn. nauch. issled. inst. khim. i tekhn. sel'sk. khoz.* 1954, 48, 111-115, 11 figs., 1 tab., 24 refs. — The flowers of 2-year old rose shrubs were removed during the growing season. The plants then gained a gain of leaves in the rosettes, followed by a gain of leaves up to frost. The control plants lost leaves in September, remaining dormant, followed by new growth of rosettes. During the first 10 days after removal of flowers, the accumulation of green and yellow pigment was normal with parallelly increasing rates. Later this parallelism in accumulation was disturbed, and every increase or decrease in chlorophyll was accompanied by diametrically opposed changes in carotenoids. This continued up to the time the control plants had entered dormancy. From that time on the plants with their regenerative organs continued their ability to form new flowers, and then, when they began parallel accumulation of the pigments, a condition prevailing continuously in the normal leaves. The disturbance occurred in the accumulation of the pigments was similar to that when the plants were deprived of light. Tests made on linden, birch, and maple leaves with similar results showed that with the decrease in chlorophyll, the carotenoids did not follow a regular pattern. During the period of necrobiosis there was a marked decrease in the content of chlorophyll. The maximum content of chlorophyll was one in normal green leaves. The maximum content of carotenoids varied with the species of the plant. The spectra of the green and yellow pigments were determined and digitized.

USSR.

Synthesis of polyene compounds in plants. II.
V. V. Vityayev, Izv. Vsesoyuz. Sel'skhoz. Akad.
1964, No. 3 (Whole No. 7), 173-91; cf. C.A. 49, 4801b.-
 The experiments reported earlier have supplied convincing evidence of a genetic relation between the green and yellow pigments of leaves. The results indicate the possibility of the new formation of carotenoids with a simultaneous destruction of the chlorophyll. The question studied was to explain how carotenoids may form and accumulate in the absence of green pigments. Seven-day-old etiolated oat seedlings were subjected to diffused light and the pigment system was studied after 15, 30, 60 min, 2, 10, and 30 hrs. exposure. Simultaneously, the pigment system was studied on the acheneocarp stripped of the pericarp, on the etiolated seedlings prior to light exposure, and on the normal seedlings grown in diffused light. After 15 min. the yellow-green pigment may still be accumulated for, but after 30 min. it is not to be found, and after 1 hr. the newly formed chlorophyll makes its appearance. Besides this pigment, carotenoids are found in oat seeds, especially in the embryo. Upon germination, the seedlings show a slight increase of carotenoids. As the chlorophyll content increases upon exposure, a gradual accumulation of carotenoids takes place. In the etiolated oat seedlings the appearance of green upon exposure gives rise to a green pigment which is not the same found in pigments of normally grown seedlings. Even after 10 hrs. exposure the light-absorption curve lies behind the curve of normal chlorophyll. Comps. of the xanthophyll group undergo very minor changes in the etiolated seedlings upon exposure to light. They remain almost in the same state as in normally grown plants. In wheat seed, besides the pigments found in oats other yellow pigments belonging to the phytylanthones are found. The carotene group is absent. The process of greening of etiolated seedlings upon exposure to light is analogous to that of oats. Papers with backsheet show that besides the yellow-green pigment in the seed there is an appreciable amt. of what seems to be a mixt. of chlorophyll and prochlorophyll. In general, the process noted with oat and wheat etiolated seedlings occurs also in buckwheat. The methods used are described and illustrated. English abstracts of references. J. S. Jaffe.

VILYAMS V.V.

VII-YAMS V V

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820011-6

VIL'YAMS, V. V.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820011-6"

Vil'yams, V.V.

3-3-17/40

AUTHORS: Williams (Vil'yams), V.V., Professor, Candidate of Agricultural Sciences
Lushchikhin, N.N., Candidate of Agricultural Sciences
Panov, N.P., Candidate of Agricultural Sciences

TITLE: Complex Soil-Agrochemical Training Practice (Kompleksnaya pochvenno-agrokhimicheskaya uchebnaya praktika)

PERIODICAL: Vestnik Vysshey Shkoly, March 1957, # 3, p 72-73 (USSR)

ABSTRACT: The experience of previous years has proved that the practical training of agronomists at the higher agricultural institutions has serious deficiencies. These specialists, for instance the graduates of the Agricultural Academy imeni Timiryazev had a poor knowledge of the methods of complex territory inspections because they had not been instructed on the method of examining quarternary deposits, were lacking in knowledge of geomorphology and were not familiar with methods of geobotanical examination. To eliminate these deficiencies the Soil-Agrochemical Faculty of the Academy introduced a complex practical training which was

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' Complex Soil-Agrochemical Training Practice

3-3-17/40

crust, vegetation, quaternary deposits, territorial geomorphological characteristics, ground water and local manure. Started in 1956, this training had its deficiencies but will be developed in the future. It lasted 3 months and started with field and vegetation fertilizer tests. Then the method and technic of carrying out field and laboratory research was explained and the water and physical properties of the soil were studied. Studies were also conducted in geobotany, geology and the other abovementioned subjects. The knowledge acquired assisted the students to complete successfully the soil-agrochemical research required in the course of their production practice, and to obtain the necessary skill for independent work.

ASSOCIATION: The Moscow Agricultural Academy imeni K.A.Timiryazev (Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A.Timiryazeva)

AVAILABLE: Library of Congress

Card 2/2

VIL'YAMS, V.V.

USSR / General Topics. Methodology, History, Scientific Institutions and Conferences, Instruction, Bibliography and Scientific Documentation. A-1

Abs Jour : Ref Zhur - Khimiya, No 5, 1958, No 13411

Author : S.N. Aleshin, V.V. Vil'yams, I.N. Zaozerskiy, V.A. Polosin

Inst : Timiryazev Academy of Farming

Title : Chairs of Chemistry at (Timiryazev) Academy (of Farming) During the Years of Soviet Rule.

Orig Pub : Izv. Timiryazevsk. s.-kh. akad., 1957, No 4, 169 - 180

Abstract : No abstract

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VIL'YAMSON, V.I. (Georgiyevsk)

Practices in controlling the shield bug *Eurygaster intergriceps*
in Stavropol Territory. Zashch.rast.ot vred.i bol. 7 no.4:4-7 Ap
'62. (MIRA 15:12)
(Stavropol Territory—*Eurygaster*s—Extermination)

SPIRINA, Ye.Ya.; VIL'YAMSON. V.I.

Extend the use of arsenic preparations in the protection of grain crops. Zashch.rast.ot vred.i bol. 7 no.5:25-26 My '62. (MIRA 15:11)

1. Glavnyy agronom po zashchite rasteniy Stavropol'skogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Spirina). 2. Nachal'nik otryada po bor'be s verditelyami rasteniy Stavropol'skogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Vil'yamson). (Stavropol Territory--Plants, Protection of) (Arsenic compounds)

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>Obtaining sodium dichromate from chromic iron ore. Ja. R. Vil'yamskii, R. M. Korzun and E. N. Pinaevskaya. <i>Sovetskoe Khimicheskoe Nauch. 1935, No. 5, 161.</i> $MgCr_2O_4$ cannot exist in the calcined mass in the production of $Na_2Cr_2O_7$. Max. absorption of CO_2 by solns. of $Na_2Cr_2O_7$ CrO_3 occurs at about 60°. Changing the rate of the gas stream has less effect than changing the amt. of liquid. B. V. Shvartsberg</p>																																																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
<p>COMMON ELEMENTS</p>																																																			

IVANOV, K.I.; VILYANSKAYA, Ye.D.

Effect of inhibitors on the autooxidation of petroleum hydrocarbons.
Dokl. AN SSSR 102 no.3:551-554. My '55. (MLRA 8:9)

1. Teplotekhnicheskiy nauchno-issledovatel'skiy institut imeni F.E.
Dzerzhinskogo. Predstavleno akademikom N.N.Semenovym
(Petroleum products) (Hydrocarbons)

VII YAA / 1.1.1
USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 35/62

Authors : Ivanov, K. I., and Vilyanskaya, Ye. D.

Title : Effect of inhibitors on the autooxidation of petroleum hydrocarbons

Periodical : Dok. AN SSSR 102/3, 551 - 554, May 21, 1955

Abstract : The effect of numerous substances, known from their oxidation inhibiting characteristics, on the oxidizability of highly purified (white) petroleum oil (vaseline) was investigated. Results showed that all inhibitors - phenyl-beta-naphthylamine, p-hydroxydiphenylamine, diethyl-p-phenylenediamine and 4,4'-diaminodiphenyldisulfide - when introduced prior to the start of the oxidation reaction had a more or less uniformly active oxidation-inhibiting effect. The inhibiting effects were entirely different for each inhibitor when introduced during the oxidizing stages of the oil. Thirteen references: 4 USSR, 1 French, 4 USA, 2 English and 2 Japanese (1922-1954). Table; graphs.

Institution : The F. E. Dzerzhinskiy Heat Engineering Sc. Techn. Inst.

Presented by: Academician N. N. Semenov, December 6, 1954

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820011-6

VILYANSKAYA, Ye. D.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859820011-6"

VILVANSKAYA, Ye. D. ~~Vilvanskaya, Ye. D.~~

AUTHOR: Ivanov, K.I. and Vilyanskaya.

65-4-3/12

TITLE: On some special features of action of inhibitors on the kinetics of auto-oxidation of hydrocarbons. (Ob osobennost-yakh devstviya samedliteley na kinetiku avtookisleniya ug' levodorov.)

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel"(Chemistry and Technology of Fuels and Lubricants)1957, No.4, pp.11-21(U.S.S.R)

ABSTRACT: The previous observations of the authors (1) on the existence of two groups of inhibitors of auto-oxidation of hydrocarbons in petroleum oils was confirmed. Inhibitors of the 1st group retard oxidation of a white oil (highly refined) only when added before the beginning of an oxidation experiment. Substances belonging to the 2nd group can inhibit an oxidation process already in progress, even when the process is well developed. The above properties are also valid for an ordinary transformer oil. A new large group of anti-oxidants was found occupying an intermediate position between Groups I and II.

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Inhibitors of this Group III, similarly to inhibitors of the first two groups, are able to retard oxidation of oil when added before the start of the process, but unlike inhibitors of Group II can inhibit an already proceeding reaction only in its auto-catalytic stage. It was shown that the above

AUTHORS: Ivanov, K. I., Vilyanskaya, Ye. D. SOV/20-121-1-29/55

TITLE: On the Interaction Between the Hydrocarbon Autooxidation Inhibitors and Alkyl- and Peroxide Radicals (O vzaimodeystvii zamedlitley avtookisleniya uglevodorodov s alkil'nyimi i perekisnymi radikalami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 1, pp. 107-110 (USSR)

ABSTRACT: The authors proved already earlier that some oxidation inhibitors of the mineral oil hydrocarbons in the liquid phases by molecular oxygen are able to retard the oxidation only if they are added to the substance to be oxidized (white oil = beloye maslo) before the beginning of the reaction; other inhibitors, however, cause this effect if they are introduced in different stages of the oxidizing processes. It was assumed that the inhibitors of the first group are able to bind active particles which initiate the chain reaction (mainly the hydrocarbon radicals R); the inhibitors of the second group are, however, assumed to interact with peroxide compounds. These peroxide compounds are formed in the initiating stage (hydroperoxides ROOH) as well as in the development stage of the re-

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SOV/20-121-1-29/55

On the Interaction Between the Hydrocarbon Autooxidation Inhibitors and Alkyl- and Peroxide Radicals

action and yield inactive products (Ref 1). Later a third group of inhibitors was found which retard as well the auto-oxidation if they are added before the beginning, but are in contrast to the inhibitors of the second group able to stop a developing (not inhibited) process only in its autocatalytic stage. In order to solve all problems connected with this problem the authors introduced alkyl (R')- and peroxide (RO_2) radicals immediately into the white oil during its oxidation in order to investigate their influence on the activity of the antioxidants of all 3 groups in different stages of oxidation. The first group was represented by p-oxydiphenylamine, the second by 4,4'-diaminodiphenyldisulfide, and the third group by 2,6-di-tert.-butyl-4-methyl-phenone (yanol). Acetyl peroxide served as source of the hydrocarbon radicals. The peroxide radicals were obtained from an interaction between cumol hydroperoxide and cobalt naphthenate (Ref 5). The results of the first series of experiments (Fig 1) show that the introduction of the CH_3 -radicals in the initiating stage of the reaction accelerates to a great extent the oxidation of the not in-

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SOV/20-121-1-29/55

On the Interaction Between the Hydrocarbon Autooxidation Inhibitors and Alkyl- and Peroxide Radicals

hibited oil. The induction period of the process is practically eliminated (Curves 1, 2, Fig 1). The inhibitors of the first and third group retard in the presence of the added CH_3 -radicals the beginning of the oxidation of the oil, in contrast to the inhibitor of the second group (Curves 4, Fig 1). In the second experimental series the same antioxidants were investigated with peroxide radicals $\text{C}_6\text{H}_5\text{C}(\text{CH}_3)_2\text{OO}\cdot$. From the obtained results (Fig 2) we may conclude that the introduction of these radicals at the beginning of the reaction accelerates as well to a great extent the oxidation process of the oil. The antioxidants of the second and third group maintain their retarding effect in the case of the introduction of RO_2^{\cdot} -radicals before as well as after the beginning of the oxidation, as well as in the case of addition of these inhibitors to the oil which oxidizes under the influence of the introduced radicals (Fig 2, B,V). An antioxidant of the first group does not stop the reaction in the case of an introduction of RO_2^{\cdot} -radicals, neither

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SOV/20-121-1-20/55

On the Interaction Between the Hydrocarbon Autooxidation Inhibitors and Alkyl- and Peroxide Radicals

before nor after beginning of the experiment. There are 2 figures and 9 references, 7 of which are Soviet.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy nauchno-issledovatel'skiy institut im. F. E. Dzerzhinskogo (All-Union Thermotechnical Scientific Research Institute, imeni F.E. Dzerzhinskiy)

PRESENTED: December 27, 1957, by N. N. Semenov, Member, Academy of Sciences, USSR

SUBMITTED: December 20, 1957

1. Oxidation inhibitors--Performance
2. Oxidation inhibitors--Chemical reactions
3. Oxidation inhibitors--Test results
4. Alkyl radicals--Test results
5. Peroxide radicals--Test results
6. Mineral oils--Oxidation

Card 4/4

VILYANAKAYA YE. D.
Oxidation of Hydrocarbons in the Liquid Phase; Collection of Articles Moscow,
Izd-vo AN SSSR, 1959, 334 pp. (Akad nauk SSSR, In-ta khim. fiziki)

Denisov, Ye.T. [Moscow State University imeni M. V. Lomonosov],
Characteristics of the Action of Inhibitors on Side-Chain Decomposition
Reactions

66

Ivanov, K.I., and Ye.D. Vilyanakaya [Vsesoyuznyy teploekhnicheskii nauch-
no-issledovatel'skiy institut imeni F. E. Dzerzhinskogo (All-Union Heat
Engineering Scientific Research Institute imeni F. E. Dzerzhinskiy)].
Effect of Inhibitors on the Kinetics of the Autoxidation of Hydro-
carbons

The authors investigate the effect of various inhibitors on the
autoxidation of hydrocarbons from petroleum crudes, as well as
various stages in the development of the oxidation process.

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Card 4/18

SOV/96-59-9-12/22

AUTHORS: Ivanov, K.I. (Dr. Chem. Sci.) and
Vilyanskaya, Ye.D., (Cand. Chem. Sci.)

TITLE: Fire-resisting Turbine Oils

PERIODICAL: Teploenergetika, 1959, Nr 9, pp 65-68 (USSR)

ABSTRACT: There is much interest abroad in fire-resisting turbine oils and work on this subject has also been done in the All-Union Thermo-Technical Institute. Besides serving to lubricate and cool the bearings, turbine oil is used as a hydraulic fluid in the governor gear, where it is under pressure. It is this oil under pressure that constitutes the main fire risk and so sometimes the object is to replace only this part of the mineral lubricating oil. The synthetic oil described in the present article is intended to replace all the mineral lubricating oil in the turbine system. A synthetic lubricant was developed based on organic phosphorus compounds. The principal physical properties of this lubricant are compared with those required by the standard specification and with those of mineral turbine oil in Table 1. The synthetic

Card 1/3 lubricant has a self-ignition temperature in air of 740°C, it is as close to the specification as normal turbine oil,

Fire-resisting Turbine Oils

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is not subject to foaming and is not toxic at low concentrations. A number of tests were made over and above those called for in the specification, particularly in respect of the effect of the material on insulation. The results which are given in Table 2 show that the new material has much less influence than mineral oil on most of the insulating materials used in alternators. A sample of the fire-resistant lubricant was tested on a special bearing rig illustrated diagrammatically in Fig 1. The test results are given in Table 3 together with comparable results for a normal petroleum lubricant, and it will be seen that the synthetic lubricant has a good resistance to ageing and foaming. Sufficient data is now available to indicate the desirability of making full-scale tests, perhaps first only in a governor system, but preferably in an entire turbine lubrication system. Some small changes will be required in turbine lubrication systems; for example, the lubricant is of higher specific gravity than water and so different arrangements must be made to drain water from the lubricant tanks. For health reasons, it is preferable that the synthetic lubricant

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Fire-resisting Turbine Oils

SOV/96-59-9-12/22

should not be exposed at temperatures above 50 °C. A four-ton batch of the new lubricant has been made for testing in service.

Card 3/3 There are 1 figure, 3 tables and 9 references, of which 1 is Soviet, 3 are German and 5 are English.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskii institut
(All-Union Thermo-Technical Institute)

S/096/60/000/011/002/018

E194/E184

AUTHORS: Ivanov, K.I. (Doctor of Chemical Sciences),
Vilyanskaya, Ye. D. (Candidate of Chemical Sciences),
and Luzhetskiy, A.A. (Engineer)

TITLE: New Developments in the Theory and Practice of Using
Anti-oxidants in Oils for the Power Industry

PERIODICAL: Teploenergetika, 1960, ¹⁷No 11, pp 34-39

TEXT: The theory and practice of the use of anti-oxidants in turbine and transformer oils is reviewed. The authors classify anti-oxidants into three groups (see Table 1). Inhibitors in the second group are able to retard oxidation that has already commenced, those of the first group are not, whilst those of the third group can retard the process only in the auto-catalytic stage. The tests were made with white oil but were found to be valid also for Baku transformer oil. The behaviour of the different groups of inhibitors depends on their ability to interact differently with the intermediate oxidation products, namely, hydroperoxides and peroxides. Proposed mechanisms of inhibitor action are given in Table 2. It is found that the chemical nature of the functional group occurring in the anti-oxidant molecule

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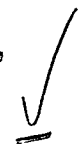
S/096/60/000/011/002/018

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New Developments in the Theory and Practice of Using Anti-oxidants in Oils for the Power Industry

does not suffice to relate the anti-oxidant to one or other of the three classes given. Apparently, the position of the functional group in the inhibitor molecule is most important. Two important practical conclusions follow, namely: it is possible to use anti-oxidants in turbine and transformer oils not only when they are new but also after they have been in service and are partially oxidised, and it is also possible to reliably stabilise regenerated oil in which some traces of oxidation products are usually left; specially selected mixtures of anti-oxidants may be used to stabilise oils. Anti-oxidants of the second and also of the third groups should be the most effective in retarding oxidation that has already commenced, whilst anti-oxidants of the first group are not suitable for this purpose. This conclusion has been confirmed both by laboratory oxidation tests and in the field by tests on turbines and transformers. Theoretical considerations are given why the simultaneous application of anti-oxidants of the different groups (1 and 2), (2 and 3), and (1 and 3) can give increased effectiveness. It is pointed out that the published works of

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S/096/60/000/011/002/018
E194/E184

New Developments in the Theory and Practice of Using Anti-oxidants
in Oils for the Power Industry

British and American authors are not in agreement on this point. However, the laboratory test results given in Tables 3 and 4 and Figs 1-3 and field tests show that a suitable mixture of two additives can be highly efficient in turbine and transformer oils. It was also shown that no enhancement of effect is produced when anti-oxidants of the same group are mixed together, except in the case of anti-oxidant BTM-8 (VTI-8), which contains sulphur. The importance of secondary properties of anti-oxidants such as their influence upon corrosion or electrical properties of the oil and particularly their solubility is discussed. Fig 4 shows the neutralisation value as function of time for a turbine before and after using inhibited turbine oil containing a mixture of the above mentioned additive VTI-8 and p-oxydiphenylamine. This article goes further than most in naming the additives and their concentrations used in the tests. There are 4 figures, 4 tables and 17 references: 10 Soviet, 6 English and 1 French.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskii institut
(All-Union Thermo-Technical Institute)

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27917

S/096/61/000/011/002/006

E194/E155

11.0910

AUTHORS:


Ivanov, K.I., Doctor of Chemical Sciences,
Vilyanskaya, Ye.D., Candidate of Chemical Sciences,
Kazanskiy, K.M., Engineer, Shilankov, B.F., Engineer,
and Fedorova, I.V., Engineer

TITLE:

Service test results with fire resistant turbine oil
"Ivviol' 1A" 8

PERIODICAL: *Toploenergetika*, no. 11, 1961, 27-29

TEXT:

Work on fire-resistant hydraulic fluids and lubricants for turbines is proceeding in several countries. For example, Pydraul F-9 is suitable as a hydraulic fluid but not as a bearing lubricant. In 1958-59 the Laboratoriya nefi (Petroleum Laboratory) of VTI developed a fire-resistant substitute for turbine oil, grade Ivviol' 1A, intended for use both as hydraulic fluid and lubricant. Laboratory test results were published by two of the present authors (Ref.3: K.I. Ivanov, Ye.D. Vilyanskaya, *Toploenergetika* no.9, 1959) and then an experimental batch of the material was made for field tests. The viscosity of the material was 20 centistokes at 50 °C, the flash point was 238 °C, open cup, 

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Service test results with fire

²⁷⁹¹⁷
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and the fire point in air 740 °C. The specific gravity at 20 °C is 1.17. The material meets the requirements of the conventional turbine oil specification in respect of stability and neutrality. Before the charge was put in the turbine certain changes were made: the cylindrical filters in the oil tank were replaced by gauze screens which could be cleaned during operation of the turbine; the design of one of the main glands was improved. In the early period of operation with Ivviol' 1A, foaming was observed but was cured by the addition of a silicone anti-foam agent to the amount of 0.1% by weight. After two or three months' service the brass gauze screens in the oil tank were attacked by the fluid. During the entire service period the make-up of fire-resistant fluid was 200 kg, whereas the amount of oil that had been required in a corresponding period was 800 kg. The difference is presumably due to the lower volatility of the fire-resistant material. After a period of service the viscosity and neutrality of the fluid were unchanged and all parts of the turbine, which were carefully examined, were in good condition. The fluid was on test for 5400 hours, during which the turbine ran without stopping for 120 days, at 18 hours a day for 110 days,

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Service test results with fire

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and at 12 hours per day for 45 days. The water content of the fluid ranged from 0.02 to 0.2%. Water is easily removed from the fire-resistant fluid because it accumulates on the surface of the oil tank from which it readily evaporates. The results indicate that the oxidation stability of the synthetic fluid is better than that of the usual mineral oil. The fire-resistant fluid darkened in colour because it attacked the protective paint used in the system. Ivviol' 1A is toxic if ingested, but if normal hygienic precautions, typical of those used with similar fluids elsewhere, are observed there is no risk on this account. The difficulties with foaming and corrosion of brass can easily be overcome and it is considered that Ivviol' 1A can replace mineral oil in turbine lubricating and hydraulic systems of the type considered. There are 1 figure, 2 tables and 3 references: 2 Soviet-bloc and 1 English. The English language reference reads as follows: Ref.1; Harris Product Engineering, vol. XX, 1954. ASSOCIATION: Vsesoyuznyy teplotekhnicheskii institut - Mosenergo (All-Union Heat Engineering Institute and Mosenergo)

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S/076/61/035/001/004/022
B004/B060

AUTHORS: Ivanov, K. I. and Vilyanskaya, Ye. D.

TITLE: Reversal of the negative catalytic effect of aniline in its action upon various stages of autoxidation of hydrocarbons

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 1, 1961, 50-57

TEXT: In their study of the effect of oxidation inhibitors upon the oxidation of hydrocarbons (Refs. 1,2) the authors found that aniline acts as an oxidation inhibitor if added to the hydrocarbon prior to the beginning of oxidation, but that it speeds up oxidation if added after oxidation. Aniline thereby differs from inhibitors of the first group (diphenyl amine, phenyl- β -naphthyl amine, p-hydroxy diphenyl amine, methyl aniline, dimethyl aniline, antipyrine), which, while no more acting as inhibitors once oxidation is started, do not have any accelerating effect either; such of the second group (α -naphthyl amine, α -naphthol, p-phenylene diamine, diethyl-p-phenylene diamine, p-amino phenol, hydroquinone, 4,4'-diamino diphenyl sulfide, p-tert-butyl phenol, benzidine, o-tolidine), which inhibit oxidation at all stages, and such of the third group

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Reversal of the negative catalytic ...

(β -naphthyl amine, β -naphthol, m-phenylene diamine, diphenyl-p-phenylene diamine, phenyl- α -naphthyl amine, di- α -naphthyl-p-phenylene diamine, di- β -naphthyl-p-phenylene diamine, o-amino phenol, diethyl-o-amino phenol, resorcinol, 2,6-di-tert-butyl-4-methyl phenol, pyramidon), which inhibit oxidation only prior to and in the autocatalytic stage, but no more once the reaction has attained a constant rate. This difference in the three groups is due to the different position of the functional groups. o-, m-, and p-toluidine behaved quite like aniline. The authors of the present article wanted to study this behavior more closely. The experiments were carried out with refined medicinal oil ($d_n^{20} = 0.8810$, $V_{50} = 32.2$ centistokes). The minimum concentration at which aniline has an inhibiting or an accelerating effect upon oxidation (2 wt%) is higher than the concentration of the other antioxidants (0.1-0.2%). The following experiments were made: a) addition of p-hydroxy diphenyl amine (1st group) and aniline to oil, beginning of oxidation test, and, after five hours, addition of further 3% aniline; b) addition of 4,4'-diamino diphenyl disulfide (2nd group) and aniline, and, after five hours, addition of 3% aniline; c) acceleration of oxidation by the addition of 3% aniline five

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B004/B060

Reversal of the negative catalytic ...

hours after beginning of oxidation, followed by addition of p-hydroxy diphenyl amine; d) like c), but addition of 4,4'-diamino diphenyl disulfide. Results: the reagent of the 1st group (experiments a and c) had no more an inhibiting effect, while the reagent of the 2nd group (experiments b and d) brought oxidation to a standstill. Aniline thus behaves in much the same way as the RO_2 radical, which is likewise not passivated by the 1st group, while it is by the 2nd group. It is assumed that aniline enters into interaction with the reaction products in the case of oil already undergoing oxidation to form a radical which combines with oxygen to form a peroxide radical. There are 6 figures, 1 table, and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut im. F. E. Dzerzhinskogo (All-Union Institute of Heat Engineering imeni F. E. Dzerzhinskiy)

SUBMITTED: April 8, 1959

Card 3/4

1ST AND 2ND SECTIONS										3RD AND 4TH SECTIONS									
PROPERTIES AND PROPERTIES INDEX																			
<p>Basic processes of manufacturing aluminum. G. G. Ushakov and Y. E. YAKOVLEV (Z. Appl. Chem., 1966, 4, 871-884). Aluminum has no appreciable effect on the reaction between chlorine and sodium carbonate at 400-450°. The rate of reaction increases with increase in the content of sodium carbonate in the mixture. The nature of the raw material has little effect on the rate of reaction. Sodium carbonate at 900° for 2 hr. Quick leaching with water leaves 85% of the aluminum insoluble; the yield of aluminum is largely increased by addition of sodium hydroxide.</p> <p>CHEMICAL ABSTRACTS.</p>																			
ASB-SLS METALLURGICAL LITERATURE CLASSIFICATION										FROM SOURCE									
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1ST AND 2ND OBJECT										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH OBJECT									
<p><i>BC</i></p> <p>Screw pulp press with preliminary double operation. I. L. Vilyanski and M. A. Matishchevskiy. Paper, 1955, No. 12, 20-22; Eng. Ind. Abstr., 1956, 32-3331. With two-belt pulp passes over two inclined sieves in comminution and into a cone-bottomed trough with a screw which carries the pulp horizontally into a conical sieve; the pitch of the screw and the diameter of the sieve decrease towards the outlet so that the vol. of the pulp discharged per turn of the screw is half that taken at the inlet. P. S. Abstr.</p>																													
<p>450-514 METALLURGICAL LITERATURE CLASSIFICATION</p>																													
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PROCESSING AND PROPERTIES INDEX																													
<div style="position: relative; height: 150px;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 2em;">BC</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 1.5em;">B-3-2</div> <div style="position: absolute; top: 30%; left: 30%; width: 60%; text-align: center;"> <p>Working of equipment without stoppages for cleaning. T. I. Vlasov and A. A. Vashchenko (Soviet, Food., 1968, No. 9, 7-18; Sov. Food Indus., 1968, No. 9, 7-18).—Extensive formation of scale in the equipment of Leningrad food sugar factories is not as previously supposed) due mainly to the presence of Mg in the lime, for in the Dubenskii factory only normal scale formation occurred in the last two seasons, although lime, water, and beet sugar were as before; it is therefore concluded that the method of sugar production, the quality of the juice, is the main factor. Data of the juice production and production are tabulated.</p> <p>P. S. ARUB</p> </div> </div>										<div style="position: absolute; top: 10px; right: 10px; font-size: 0.8em;"> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 </div>																			
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